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Greg

Tim Lankester Esq  
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Dear Tim,

ELECTRICITY PRICES TO LARGE USERS

I attach the note on short run marginal cost pricing of electricity for which you asked this morning as a contribution to tomorrow's discussion of my Secretary of State's paper E(81)39.

I am copying this to the private secretaries to the members of E, the Secretaries of State for Scotland and Wales, the Chancellor of the Duchy of Lancaster, the Parliamentary Secretary to the Treasury and Sir Robert Armstrong.

Yours ever,

J D WEST  
Private Secretary



## ELECTRICITY PRICES TO LARGE USERS

- 1 This note discusses the extent to which a change to prices on the basis of Short Run Marginal Costs (SRMC) by the electricity supply industry would eliminate the price disparities identified in the NEDO Task Force Report.
  
- 2 This Report showed a wide range of price disparities (10-35% or more) for some large UK users of electricity with the greatest disparities for consumers with the biggest load factors. At lower load factors, particularly with Germany, the disparities narrowed or disappeared.
  
- 3 For those large users able to take advantage of the additional measures of flexibility announced in the Budget Statement and introduced by the industry from 1 April, the gap has been closed by up to 8%.
  
- 4 We have considered whether pricing by the electricity supply industry at SRMC for these large users would close the remaining gap which is still substantial (the attached Annex defines SRMC). The Electricity Council have confirmed that pricing at SRMC for the largest users with the highest load factors would reduce prices by around 5-10%. In general those with the largest load factors will benefit least. Thus pricing down to SRMC would not close the gap with continental prices for the largest consumers.
  
- 5 The basic reasons for the wide disparities with France and Germany are:-
  - (i) France: higher proportion of hydro and nuclear capacity at present (45% as ~~against~~ 14% UK), with the firm prospect of a predominantly nuclear system by 1985 (50% as against 12% UK). This results in a lower cost structure, with prices significantly below ours across all categories of consumer;



- (ii) Germany: a lower cost base (eg brown coal) and a tariff structure in which the unit rates fall sharply as load factor increases. This results in prices to large users which are thought to be below SRMC. The German electricity supply industry is composed of many different utilities, and pricing practices are not uniform.

These cost differences have been magnified with the appreciation of sterling particularly over the past year.

6 If the supply industry were to price at SRMC levels to all monthly-billed industrial consumers this would reduce prices by about 25% and reduce the industry's revenue by about £850m. If this were to be confined to large users with a maximum demand of 20 MW or more (74 consumers in England and Wales) the figures would be 15% and £100m respectively. These include a number of users with a relatively low load factor, including some steelworks. There are only 16 consumers over 20 MW with a load factor in excess of 60%. Their prices are about 5-10% over SRMC.

7 Reference has already been made in para 7 of E(81)39 to the difficulties of following a selective approach. These apply whether selection is based on individual firms or a category of consumer. Almost inevitably, competing firms in the same sector would be treated differently. In addition the legal uncertainties over undue preference and in the European context-state aids to industry - could also apply. The electricity supply industry would seek compensation, for which there are no existing powers. The practical aspects of assisting a category of customers as discussed in this note, rather than selected individual firms as proposed in E(81)39, would need discussion with the industry.



## SHORT RUN MARGINAL COSTS

SRMC is the additional cost of increasing output without capital expenditure to meet extra demand on the system.

2 This is primarily the fuel cost. It also includes an allowance for energy losses in the transmission and distribution system plus some associated repair, maintenance and manning costs of power stations. These short run costs vary considerably depending on the kind of power station being run at the margin to meet demand. They will be higher during the day and at times of peak demand and lower at night. The SRMC price to the individual customer will therefore vary with his pattern of consumption.

3 But in general the very large user will use electricity more continuously and will seek to manage his demand more effectively. If so his current price will include a smaller element of fixed costs and will be closer to SRMC levels, so that the difference between his current price and SRMC will be less. An average figure can be misleading as the load characteristics for these consumers are so varied. An indication of how widely these can vary even within the same industry was given in the NEDO Report (Table 12 attached).

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